<u>Remarks</u>

Claims 1-40 and 43-58 are pending in the application, with Claims 1, 21, 43, and 55-58 being independent.

Claims 41 and 42 have been cancelled without prejudice to or disclaimer of the subject matter contained therein. Claims 19, 20, 23, 39, and 40 have been amended. Claims 43-58 are newly presented. No new matter is believed to have been added.

Claims 1-3, 7-8, 12, 18, 20-23, 27-28, 32, 38, and 40-42 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,708,146 ("Sewall"). The remaining rejected claims, i.e., Claim 4-6, 9-11, 13-17, 19, 24-26, 29-31, 33-37, and 39, all stand rejected under 35 U.S.C. § 103 as allegedly being obvious over Sewall in view of one or more secondary citations to U.S. Patent No. 6,438,513 ("Pastor"), U.S. Patent No. 4,811,399 ("Landell"), U.S. Patent No. 6,377,919 ("Burnett"), U.S. Patent No. 6,516,090 ("Lennon"), U.S. Patent No. 5,799,276 ("Komissarchik"), and U.S. Patent No. 5,742,694 ("Eatwell"). These rejections are respectfully traversed.

Independent Claim 1 refers to an apparatus for detecting the presence of speech within an input audio signal, and recites a memory for storing a predetermined function which gives, for a given set of audio signal values, a probability density for parameters of a predetermined speech model which is assumed to have generated the set of audio signal values, the probability density defining, for a given set of model parameter values, the probability that the predetermined speech model has those parameter values, given that the speech model is assumed to have generated the set of audio signal values. Claim 1 also recites means for receiving a set of audio signal values representative of an input audio signal, means for applying

the set of received audio signal values to the stored function to give the probability density for the model parameters for the set of received audio signal values, means for processing the function with the set of received audio signal values applied to obtain values of the parameters that are representative of the input audio signal, and means for detecting the presence of speech using the obtained parameter values.

Sewall describes an acoustic classification system that is intended to identify the different types of data that are transmitted over a digital transmission channel. Column 6, lines 12-22 disclose the different classes of data signals that are carried over the channel and which the classification system is designed to detect. It discriminates between the different data signals by looking for specific characteristics that the different types of data signals possess. To detect these characteristics, Sewall processes the signals using second order moment analysis and autocorrelation analysis. The resulting "parameters" are therefore representative of these characteristics of the data, and not representative of the signals themselves. Indeed, this is evident since all speech will be classified into the same class (class 8). The parameters generated according to Sewall, therefore, are not representative of the speech signal values. Instead, they are representative of some characteristic that is common to all speech signals.

For example, the autocorrelation analysis identifies signals having periodic components and their approximate frequencies. This is because a completely random signal (like noise) will have a high autocorrelation value for a zero lag, and approximately zero values for all other lags. However, for a periodic signal, peaks in the autocorrelation function will appear at different lags depending on the periodicity (frequency) of the signal. Since data signals and

speech signals have different periodic components, it is possible to distinguish the speech and different data signals by looking at the value of the autocorrelation function at different lags.

In contrast to Applicant's Claim 1, however, Sewall is read to use parameters to classify signals based on a characteristic common to all speech signals, not based on a set of audio signal values. The parameters in Sewall, therefore, are different than the parameters of Applicant's Claim 1. Without the same parameters, it follows accordingly that Sewall does not teach or suggest receiving a set of audio signal values representative of an input audio signal, applying the set of received audio signal values, processing the function with the set of received audio signal values applied to obtain values of the parameters that are representative of the input audio signal, and detecting the presence of speech using the obtained parameter values.

Applicant therefore submits that Sewall does not teach or suggest an apparatus according to Claim 1. Accordingly, Applicant submits that independent Claim 1 patentably distinguishes the invention over Sewall.

Independent Claim 21 relates to a method of detecting the presence of speech, and corresponds substantially to Claim 1. Applicant, therefore, submits that for reasons similar to those discussed with respect to Claim 1, Claim 21 is also patentable over Sewall.

Applicant accordingly submits that independent Claims 1 and 21 patentably distinguish the invention over Sewall.

Applicant submits that none of the other cited art, taken alone or in combination, compensates for the deficiencies of Sewall as discussed above with respect to independent Claims 1 and 21. Therefore, reconsideration and withdrawal of the §§ 102 and 103 rejections are respectfully requested.
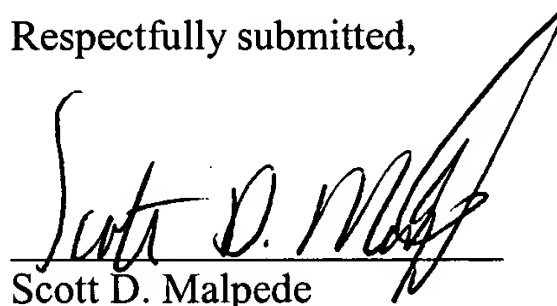
The rejected dependent claims are submitted to be allowable due to their dependency from allowable base claims, and further due to additional recited features.

Applicant submits that new independent Claims 43, 55, 56, 57, and 58 are allowable for at least the reasons set forth above with respect to Claim 1.

Applicant submits that the application is in condition for allowance. Favorable consideration and passage to issue at the Examiner's early convenience are respectfully requested.

Applicant's undersigned attorney may be reached in Washington, D.C. by telephone at (202) 530-1010. All correspondence should continue to be directed to the below-listed address.

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